



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	MICHAEL D. ROSENZWEIG	§ Group Art Unit:	2642
Serial No.:	09/892,681	§	
Filed:	June 27, 2001	§	
For:	REDUCING UNDESIRABLE AUDIO SIGNALS	§ Examiner:	William J. Deane, Jr.
		§ Atty. Dkt. No.:	ITL.0597US (P11773)
		§ Assignee:	Intel Corporation

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Declaration Under 37 C.F.R. §1.131

I, Michael D. Rosenzweig, declare as follows:

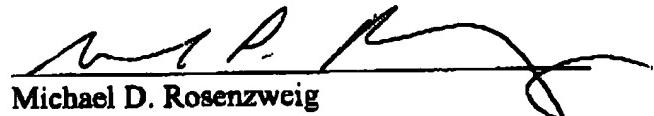
1. I am an employee of Intel Corporation ("Intel"), assignee the above-entitled application, and was an employee of Intel at the time of the filing of the application.
2. Prior to April 3, 2001, I conceived of the subject matter set forth in a pair of invention disclosure forms, true and correct copies of which are attached hereto at Exhibit A.
3. While the dates of creation of the invention disclosure forms and the date the invention disclosure forms were received in the Intel legal department have been redacted, these dates are prior to April 3, 2001.
4. Also attached at Exhibit A is a true and correct copy of a corresponding Intel data sheet, indicating the above-entitled application was opened and assigned to Trop, Pruner & Hu, P.C. by Intel on April 26, 2001.
5. Shortly after that time, I was contacted by Ruben Bains, an attorney at Trop, Pruner & Hu, P.C. I had one or more telephone conferences with Mr. Bains regarding the subject matter of the patent application, and he prepared a draft of the above-entitled application. On or about June 9, 2005, I received a draft application from Mr. Bains,

which I diligently reviewed and commented on. Attached hereto at Exhibit B is a true and correct copy of a letter from Mr. Bains dated June 8, 2001 enclosing the draft application.

6. I received a final version of the patent application from Mr. Bains on or about June 26, 2001. I reviewed the final version and on June 27, 2001, I executed a declaration and assignment for the patent application, and provided these papers to Mr. Bains via facsimile. Also attached hereto at Exhibit B is a true and correct copy of a letter dated June 25, 2001 that I received from Mr. Bains with the final patent application.
7. The above-entitled patent application was filed that same day, June 27, 2001.

I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both under §1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Date: 22 Sep 2005



Michael D. Rosenzweig

EXHIBIT A

171738

18289

INTEL INVENTION DISCLOSURE
ATTORNEY-CLIENT PRIVILEGED COMMUNICATION
located at <http://legal.intel.com>

DATE: Redacted

WIRELESS
COMM./WCCG/HCD



It is important to provide accurate and detailed information on this form. The information will be used to evaluate your invention for possible filing as a patent application. When completed and signed, please return this form to the Legal Department at JF3-147. You can submit electronically via e-mail to "Invention disclosure submission" if all of the information is electronic, including drawings and supervisor approval. If you have any questions, please call 264-0444.

1. Inventor: <u>Rosenzweig</u>	Last Name <u>Michael</u>	First Name <u>Michael</u>	Middle Initial <u>D</u>
Phone <u>978/568-5735</u>	MS: <u>HD2-230</u>	Fax # <u>978/568-6486</u>	
Citizenship: <u>USA</u>	WWID: <u>10060288</u>	Contractor: <u>YES</u>	<u>NO</u> <input checked="" type="checkbox"/>
Inventor E-Mail Address: <u>Michael.rosenzweig@intel.com</u>			
Home Address: <u>10 Stone Crossing Way</u>			
City _____	State <u>MA</u>	Zip <u>01748</u>	Country <u>USA</u>
*Corporate Level Group (e.g. IAG, NCG, NBG) <u>WCCG</u>	Division <u>HCD</u>	Subdivision <u>HCD SE</u>	
Supervisor* <u>Gang Liang</u>	WWID <u>10602153</u>	Phone _____	MS: <u>HD2-230</u>

*If you are unsure of this information, please discuss with your manager.

(PROVIDE SAME INFORMATION AS ABOVE FOR EACH ADDITIONAL INVENTOR)

RECEIVED

**PATENT DATABASE GROUP
INTEL LEGAL TEAM**

2. Title of Invention: Active noise cancellation in conjunction with MP3 playback Redacted
3. What technology/product/process (code name) does it relate to (be specific if you can):
PCA Specification, Applications running on wireless devices.
4. Include several key words to describe the technology area of the invention in addition to # 3 above: Scalability, Wireless, Application, Software
5. Stage of development (i.e. % complete, simulations done, test chips if any, etc.): Concept/Specification
6. (a) Has a description of your invention been, or will it shortly be, published outside Intel:
 NO: YES: _____ If YES, was the manuscript submitted for pre-publication approval? _____
 IDENTIFY THE PUBLICATION AND THE DATE PUBLISHED: _____
- (b) Has your invention been used/sold or planned to be used/sold by Intel or others?
 NO: _____ YES: _____ DATE WAS OR WILL BE SOLD: _____

ATTORNEY-CLIENT PRIVILEGED COMMUNICATION

(c) Does this invention relate to technology that is or will be covered by a SIG (special interest group)/standard/specification?

NO: _____ YES: X Name of SIG/Standard/Specification: PCA Specification

(d) If the invention is embodied in a semiconductor device, actual or anticipated date of tapeout? _____

(e) If the invention is software, actual or anticipated date of any beta tests outside Intel Summer 2002

7. Was the invention conceived or constructed in collaboration with anyone other than an Intel blue badge employee or in performance of a project involving entities other than Intel, e.g. government, other companies, universities or consortia? NO: X YES: _____ Name of individual or entity: _____

8. Is this invention related to any other invention disclosure that you have recently submitted? If so, please give the title and inventors: PCA Related disclosures

.....
**PLEASE READ AND FOLLOW THE DIRECTIONS ON
HOW TO WRITE A DESCRIPTION OF YOUR INVENTION**

Please attach a description of the invention to this form and include the following information:

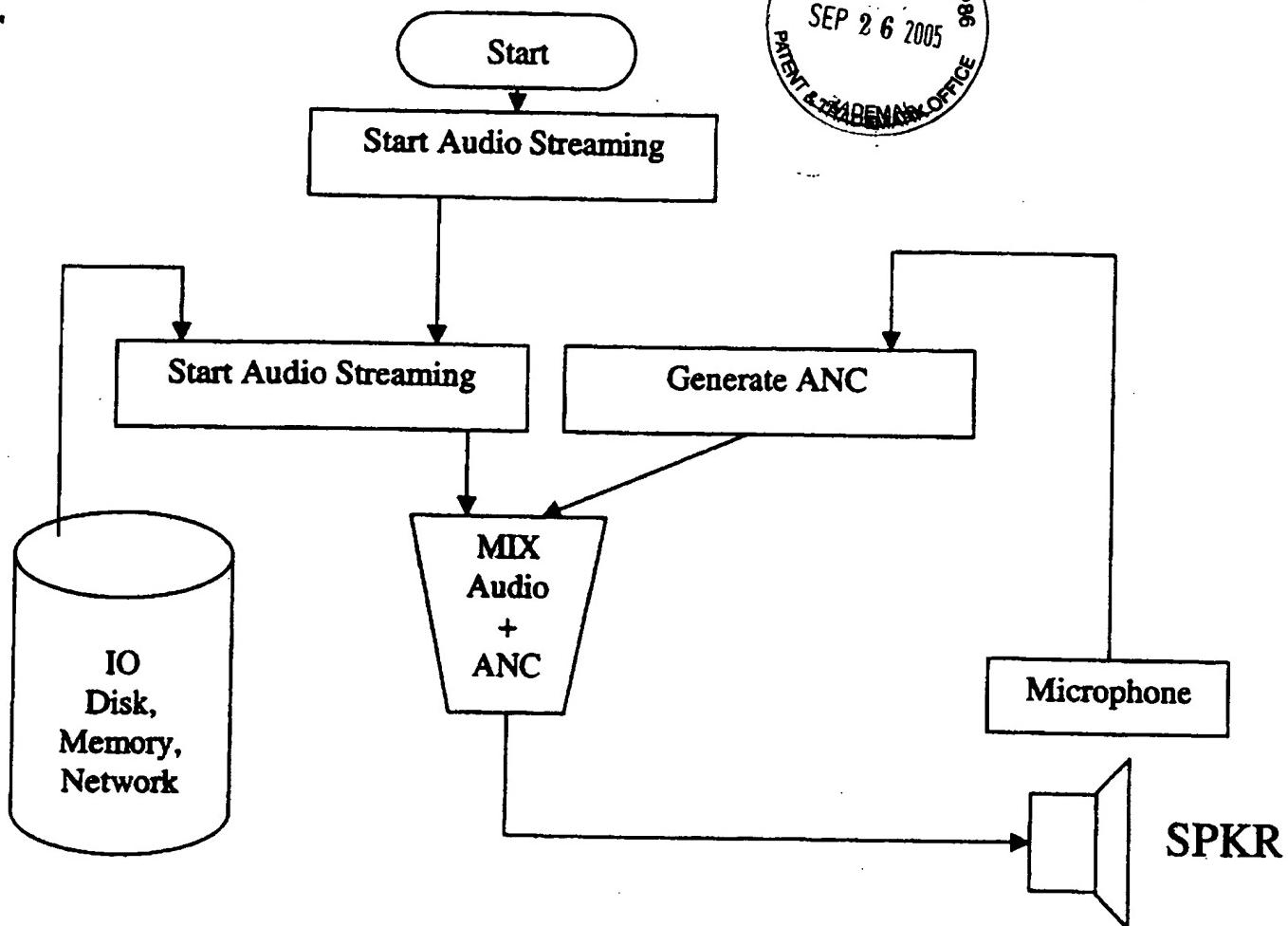
1. **Describe in detail what the components of the invention are and how the invention works.**

This invention is the combination of two well known functional components, an MP3 player and active noise cancellation (ANC) device. ANC is performed on the same processing engine as the MP3 decode (or other audio) functionality. This solution may include ANC enabled headphones which incorporate a microphone at each earpiece, or a microphone/speaker combination at the device.

2. **Describe advantage(s) of your invention over what is done now.**

Produces high quality audio in a noisy environment with a single device.

3. **YOU MUST include at least one figure illustrating the invention.
If the invention relates to software, include a flowchart or pseudo-code representation of the algorithm.**



4. Value of your invention to Intel (how will it be used?).

Enable the delivery of high quality audio on PCA devices.

5. Explain how your Invention is novel. If the technology itself is not new, explain what makes it different.

This is typically solved with the use of dedicated components, one for MP3 playback, and another device for ANC.

**6. Identify the closest or most pertinent prior art that you are aware of.
??**

**7. Who is likely to want to use this invention or infringe the patent
If one is obtained and how would infringement be detected?**

Vendors on MP3 players, PDA's with MP3 playback functionality, ANC headset manufacturers.

**HAVE YOUR SUPERVISOR READ, DATE AND SIGN COMPLETED FORM
OR FORWARD IT ELECTRONICALLY VIA E-MAIL TO "INVENTION DISCLOSURE SUBMISSION"**

DATE: _____ SUPERVISOR: _____

BY THIS SIGNING, I (SUPERVISOR) ACKNOWLEDGE THAT I HAVE READ AND UNDERSTAND THIS
DISCLOSURE AND DOCUMENTATION

P11738
18290

INTEL INVENTION DISCLOSURE
ATTORNEY-CLIENT PRIVILEGED COMMUNICATION

located at <http://legal.intel.com>DATE: RedactedWIRELESS / WCCG / HCD

It is important to provide accurate and detailed information on this form. The information will be used to evaluate your invention for possible filing as a patent application. When completed and signed, please return this form to the Legal Department at JF3-147. You can submit electronically via e-mail to "Invention disclosure submission" if all of the information is electronic, including drawings and supervisor approval. If you have any questions, please call 264-0444.

1. Inventor: RosenzweigMichaelD

Last Name

Phone 978/568-5735M/S: HD2-230

First Name

Fax # 978/568-6486Citizenship: USAWWID: 10060288

Contractor: YES _____

Middle Initial

XInventor E-Mail Address: Michael.rosenzweig@intel.comHome Address: 10 Stone Crossing WayCity _____ State MA Zip 01748 Country USA*Corporate Level Group (e.g. IAG, NCG, NBG) WCCG Division HCD Subdivision HCD SESupervisor* Gang Liang WWID 10602153 Phone _____ M/S: HD2-230

*If you are unsure of this information, please discuss with your manager.

(PROVIDE SAME INFORMATION AS ABOVE FOR EACH ADDITIONAL INVENTOR)

RECEIVED

RedactedPATENT DATABASE GROUP
INTEL LEGAL TEAM

2. Title of Invention: Incorporation of anti-noise generation into a wireless device
3. What technology/product/process (code name) does it relate to (be specific if you can): PCA Specification, Applications running on wireless devices
4. Include several key words to describe the technology area of the invention in addition to # 3 above: Scalability, Wireless, Application, Software
5. Stage of development (i.e. % complete, simulations done, test chips if any, etc.): Concept/Specification
6. (a) Has a description of your invention been, or will it shortly be, published outside Intel:

NO: YES: _____ If YES, was the manuscript submitted for pre-publication approval? _____

IDENTIFY THE PUBLICATION AND THE DATE PUBLISHED: _____
- (b) Has your invention been used/sold or planned to be used/sold by Intel or others?

NO: _____ YES: _____ DATE WAS OR WILL BE SOLD: _____

- (c) Does this invention relate to technology that is or will be covered by a SIG (special interest group)/standard/or specification?

NO: _____ YES: X Name of SIG/Standard/Specification: PCA Specification

- (d) If the invention is embodied in a semiconductor device, actual or anticipated date of tapeout? _____

- (e) If the invention is software, actual or anticipated date of any beta tests outside Intel Summer 2002

7. Was the invention conceived or constructed in collaboration with anyone other than an Intel blue badge employee or in performance of a project involving entities other than Intel, e.g. government, other companies, universities or consortia? NO: X YES: _____ Name of individual or entity: _____

8. Is this invention related to any other invention disclosure that you have recently submitted? If so, please give the title and inventors: PCA Related disclosures

.....
**PLEASE READ AND FOLLOW THE DIRECTIONS ON
HOW TO WRITE A DESCRIPTION OF YOUR INVENTION**

Please attach a description of the invention to this form and include the following information:

1. **Describe in detail what the components of the invention are and how the invention works.**

This invention is the inclusion of active noise cancellation (ANC) into a wireless device. ANC is performed on wireless device, treating the wireless devices as a general purpose DSP engine. In controlled scenarios, the wireless device can then be used to "quite" noisy environments. This solution may include ANC enabled headphones (or earpiece) which incorporate a microphone at each earpiece, or a microphone/speaker combination at the device.

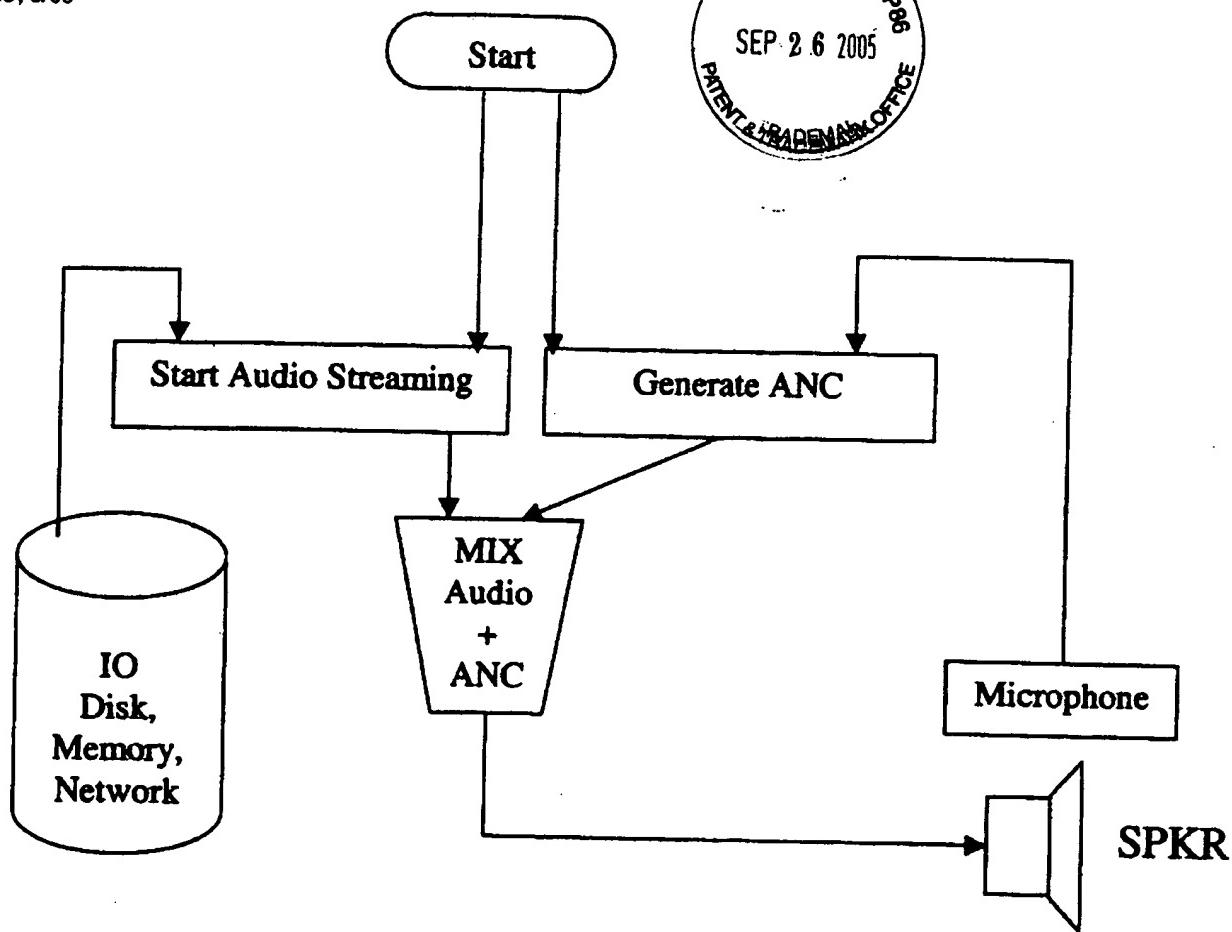
Example #1) A user could place their cell phone in their car and then active the built-in ANC functionality to provide a quite ride. The speaker/microphone combination built into the phone may be used, or through an audio connector, the stereo system in the automobile could be used for additional output power.

Example #2) Using the cell phone in a noisy environment such as an airport, where the built-in ANC is activated to reduce background noise.

2. **Describe advantage(s) of your invention over what is done now.**

Produces high quality speech/audio in a noisy environment using a single device.

3. **YOU MUST include at least one figure illustrating the invention.
If the Invention relates to software, include a flowchart
or pseudo-code representation of the algorithm.**



4. Value of your Invention to Intel (how will it be used?).

Enable the delivery of high quality audio on PCA devices.

5. Explain how your invention is novel. If the technology itself is not new, explain what makes it different.

This is typically solved with the use of dedicated components, one for MP3 playback, and another device for ANC.

**6. Identify the closest or most pertinent prior art that you are aware of.
??**

**7. Who is likely to want to use this invention or infringe the patent
if one is obtained and how would infringement be detected?**

Vendors of cell phones and other wireless devices looking to add additional value and utility to their devices.

**HAVE YOUR SUPERVISOR READ, DATE AND SIGN COMPLETED FORM
OR FORWARD IT ELECTRONICALLY VIA E-MAIL TO "INVENTION DISCLOSURE SUBMISSION"**

DATE: _____ SUPERVISOR: _____

**BY THIS SIGNING, I (SUPERVISOR) ACKNOWLEDGE THAT I HAVE READ AND UNDERSTAND THIS
DISCLOSURE AND DECLINE TO FILE A PATENT APPLICATION.**

Matter #: P11738

Intel Grp Atty: KMS EL Work Atty: TPH

Matter Status: IN PROCESS

TYPE OF INTEL PATENT APPLICATION FILE

*Patent: Utility Design Reissue Reexam CPA (C) CIP (X) Divisional (D)

Title of File: ACTIVE NOISE CANCELLATION IN CONJUNCTION WITH MP3 PLAYBACK

INTEL DISCLOSURE AND FOREIGN FILING INFORMATION

*Disclosure number(s): 18289, 18290

*Product/Process: PCA SPECIFICATION, APPLICATIONS RUNNING ON WIRELESS DEVICES

Intel Committee: WIRELESS COMMUNICATIONS & CO Intel Group: WCCG Intel Division: HCD

F-Filing: NO Ctry:

Notes: P11738 (18289 AND 18290) OPENED AND ASSIGNED TO TPH PER JB EMAIL ON 4/26/01 -MC.

INTEL ABSTRACT CODES (Check One or More)

Redacted

INTL-0597-US (P11738)

(TNT/____)

INTEL CORP. - WCC

FF - No

ACTIVE NOISE CANCELLATION IN CONJUNCTION WITH

INTEL ABST MP3 PLAYBACK

EXHIBIT B

TROP, PRUNER & HU, P.C.

INTELLECTUAL PROPERTY LAW ATTORNEYS



8554 Katy Freeway, Suite 100
Houston, Texas 77024

Business: (713) 468-8880
Facsimile: (713) 468-8883

June 8, 2001

VIA UPS

Mr. Michael D. Rosenzweig
Intel Corporation
75 Reed Road, M/S #HD2-230
Hudson, Massachusetts 01749

Re: U.S. Patent Application entitled
Reducing Undesirable Audio Signals
Intel's ref: P11773
Our ref: INTL-0597-US

Dear Mike:

Enclosed is a draft of the above-referenced patent application on your invention.
Please let me have your comments, preferably by telephone, so I can get a final
version to you as soon as possible.

Very truly yours,

Ruben S. Bains

RSB:svh

Enclosure
Draft of Patent Application



TROP, PRUNER & HU, P.C.

INTELLECTUAL PROPERTY LAW ATTORNEYS

8554 Katy Freeway, Suite 100
Houston, Texas 77024

Business: (713) 468-8880
Facsimile: (713) 468-8883

June 25, 2001

VIA UPS

Mr. Michael D. Rosenzweig
Intel Corporation
75 Reed Road, M/S #HD2-330
Hudson, Massachusetts 01749

Re: U.S. Patent Application entitled
Reducing Undesirable Audio Signals
Intel's ref: P11773
Our ref: INTL-0597-US

Dear Mike:

Please return the original formal papers in the enclosed self-addressed, stamped envelope provided for your convenience.

Very truly yours,

Ruben

Ruben S. Bains

RSB:svh

Enclosure
Self-addressed, stamped envelope

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- REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY**
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